



UNITED STATES PATENT AND TRADEMARK OFFICE

4/7  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,517	01/03/2002	Don Carl Powell	MIO 0059 V2	3647

7590 08/26/2002

Killworth, Gottman, Hagan & Schaeff, L.L.P.  
Suite 500  
One Dayton Centre  
Dayton, OH 45402-2023

EXAMINER

LE, DUNG ANH

ART UNIT	PAPER NUMBER
----------	--------------

2818

DATE MAILED: 08/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/039,517

Applicant(s)

POWELL ET AL.

Examiner

DUNG A LE

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 0200 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### **Response to Preliminary Amendment**

In Preliminary Amendment, applicant cancels claims 1-29, and 30-31 are remained for examination is acknowledged.

This application is a Divisional of the co-pending application serial number 09/653639, filed on August 31, 2000.

### ***Oath/Declaration***

The oath/declaration filed on 1/3/2002 is acceptable.

### ***Drawings***

The drawings are objected to for the following reasons:

The reference sign 401 in Specification on page 10, line 6 is not associated with the corresponding drawing figure 4.

The reference signs 512, page 10, lines 14 and 17, in Specification, are not associated with the corresponding drawing figure 5.

Corrections are required.

*Specification*

The specification is objected to for the following reasons:

- (i) The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (see MPEP § 606.01).
- (ii) A new abstract is required that is clearly indicative the invention to which the claims are directed. Note that, the claims are directed to System and Semiconductor device not a method of making a semiconductor device.
- (iii) The specification does not include reference sign 407 of Figure 4 (see CFR § 1.84p). Correction is required.
- (iv) The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).  
Correction of the following is required: “ source rail “ in claim 31, lines 19 and 21.

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

**Claim Rejections**

***Claim Rejections - 35 USC § 102***

**The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

**Claim 30 is rejected under 35 USC 102 (e) as being anticipated by Lee et al. (6218260).**

Lee et al. disclose a capacitor device comprising:

a first electrode 21a formed over a substrate 2 (fig. 1B);

a primarily nitride silicon-containing barrier layer 22 (col 7, line 13) formed over the electrode 21;

a dielectric layer 23 (col 7, line 18) formed over the primarily nitride silicon-containing barrier layer 22; and

a second electrode 24 (col 7, line 19) formed over the dielectric layer 23.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 31 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Hu (5962904) in view of Mills et al. (5696917).**

Hu discloses memory device (figs. 1-4) comprising:

a substrate 12 (fig. 3);

a drain 26 formed in the substrate 12 (fig. 3, col 4, line 64);

a source 26 rail formed in the substrate 12;

a first oxide layer 14 deposited over the substrate 12 stretching from the drain 26 to the source 26 rail;

a silicon-containing barrier layer 18 (col 3, line 65 to col 4, line 14) deposited over the first oxide layer 14; and

a gate electrode 20 deposited over the silicon-containing barrier layer 18.

Hu discloses the memory device, but does not disclose a memory device is connect to computer system comprising having at least one processor; a system bus.

However, Mills et al. show a computer system 200 comprising (Fig. 2, col 4, line 55- col 5, line5):

at least one processor 210;

a system bus 220/260;

a memory device 230/250 coupled to the system bus 220.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect Hu's device to the computer system as taught by Mills et al. in order to take advantage of many beneficial and synergistic effects that stem from having the non-volatile main memory computer system architecture of computer system (col 11, lines 55-59).

When responding to the office action, Applicants' are advice to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung A. Le whose telephone number is 703-306-5797. The examiner can normally be reached on Monday-Friday 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 703-308-4910. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Dh  
Dung A. Le  
Date : 8/02

Dung A. Le Dh  
Examiner  
Art Unit : 2818